



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,074	10/31/2000	Jose J. Garcia-Luna-Aceves	NC30316	1256

23860 7590 02/27/2003

BRIAN T. RIVERS
NOKIA INCORPORATED
6000 CONNECTION DRIVE
MD 1-4-755
IRVING, TX 75039

EXAMINER

DUONG, DUC T

ART UNIT PAPER NUMBER

2663

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,074

Applicant(s)

GARCIA-LUNA-ACEVES ET AL.

Examiner

Duc T. Duong

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,9,14-17,21-24,29 and 34-37 is/are rejected.
- 7) ☒ Claim(s) 5-8,10-13,18-20,25-28,30-33 and 38-40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed August 27, 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 9, 14, 15, 21-24, 29, 34, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Perlman (U.S. Patent 4,864,559).

Regarding to claims 1 and 21, Perlman discloses an apparatus for communicating multicast group membership information in a network between a plurality of routers in a multicast group (Fig. 1 col. 7 lines 44-54), wherein each of the plurality of routers reports routing tree information to other routers of said plurality of routers (Fig. 1 col. 7 lines 55-62), said apparatus comprising a first router, said first router for receiving update information (col. 6 lines 54-58, link state packet) transmit from a second router (Fig. 7 col. 12 lines 15-18) and including update information on a multicast group, wherein said first router determines, based at least in part on said

update information (link state) and the routing tree information (topology) reported by said second router, whether said first router must transmit said update information to at least one neighbor router of said first router so that all members of said multicast group remain connected (Fig. 7 col. 12 lines 55-57), and wherein said first router, in response to a positive determination that said first router must transmit said update information, transmits said update information to said at least one neighbor router (Fig. 7 col. 12 lines 66-67 and col. 13 lines 1-4).

Regarding to claims 2 and 22, Perlman discloses the update information includes an identifier of said multicast group (Fig. 5 col. 10 lines 43-45).

Regarding to claims 3, and 23, Perlman discloses the update information includes a network address of said first router (Fig. 5 col. 10 lines 34-36).

Regarding to claims 4, 9, 24, and 29, Perlman discloses the update information includes an indication that said first router is becoming a member or no longer a member of said multicast group (col. 8 lines 35-38).

Regarding to claims 14 and 34, Perlman discloses an apparatus for forwarding multicast packets in a network comprising a plurality of routers in a multicast group (Fig. 1 col. 7 lines 44-54), wherein each of the plurality of routers reports routing tree information (topology) to other routers of said plurality of routers (Fig. 1 col. 7 lines 55-62), said apparatus comprising a first router, said first router for receiving a multicast packet from a second router in a network determining (Fig. 7 col. 12 lines 15-18), based at least in part, on said control information (col. 6 lines 54-58, link state packet) and the routing tree information reported by said second router, if said multicast packet is to be

forwarded by said first router (Fig. 7 col. 12 lines 55-57), and wherein said first router, in response to a positive determination that said multicast packet is to be forwarded, forwards said multicast packet to at least a third router (Fig. 7 col. 8 lines 11-25).

Regarding to claims 15 and 35, Perlman discloses the multicast packet includes an address of said multicast group (Fig. 5 col. 10 lines 43-45).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16, 17, 36, and 37 rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Soloway et al (U.S. Patent 5,265,092).

Regarding to claims 16, 17, 36, and 37, Perlman discloses all the limitation with respect to claims 14 and 34, except for the multicast packet includes an address of the source of said multicast packet (claims 16 and 36); the multicast packet includes a time value, wherein said time value is used to limit the time said multicast packet is allowed to remain in the system (claims 17 and 37).

However, Soloway discloses a routing mechanism for a multicast packet includes an address (originator ID) of the source of said multicast packet (Fig. 6 col. 10 lines 20-23) and a time value (age field), wherein said time value is used to limit the time said multicast packet is allowed to remain in the system (Fig. 6 col. 10 lines 23-26).

Art Unit: 2663

Thus, it would have been obvious to one of ordinary skilled in the art, at the time of the invention, to include the multicast packet as taught by Soloway in Perlman's system to prevents looping of packets and provides shortest path routing.

Allowable Subject Matter

6. Claims 5-8, 10-13, 18-20, 25-28, 30-33, and 38-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

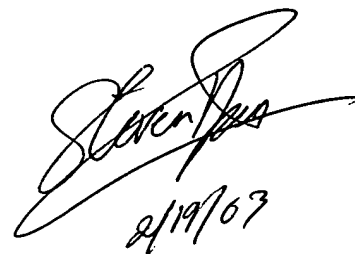
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Duong whose telephone number is 703-605-5146. The examiner can normally be reached on M-Th (8:30 AM-5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

DD
February 12, 2003



2/19/03